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## TH21- Aluminum Wall Panels How to Get the System You Specify

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**CONSTRUCT2009**  
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## Why you want what you want - Drivers

Value to your customer

- Aesthetics
- Durability
- Low maintenance
- Performance
- Liability
- Cost / Budget



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### Drivers-

**Aesthetics:**

**Colors**

- Corporate Colors
- Impact Colors
- Reflectivity





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**Drivers-**

**Aesthetics:  
Geometry / Shape  
/ Texture**

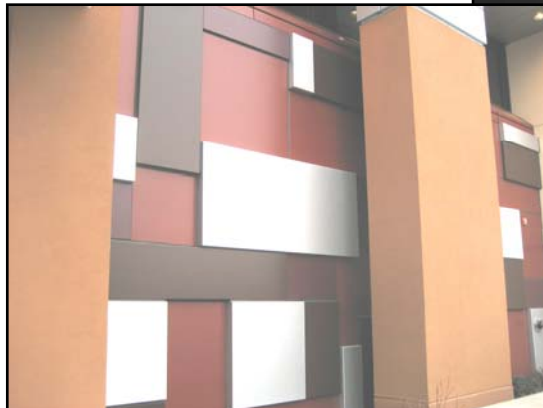


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**Drivers-**

**Aesthetics:  
Relief**





## Drivers

### Durability:

- Impact Strength
- Scratch Resistance
- Resistance to the environment
  - UV light
  - Pollution
  - Finger Printing
  - Etc.



## Drivers-

### Low Maintenance:

- Cleaning
- Resealing / Caulking
- Finish Durability
  - Natural Materials
  - Painted Finishes
  - Anodized Finishes





## Drivers-

### Performance:

- High Wind Loads
- Missile impact
- Blast Resistance
- Specific environmental Concerns
  - Salt Fog
  - Acid Rain
  - Project specific Concerns



## Drivers-

### Liability:

- Factory Trained installing subcontractors
- Testing
  - Job specific testing
  - Factory system specific testing
- Low Bid / Low Quality
- Inexperienced manufacturer / contractor
- Manufacturers / Contractors operating out of their comfort zone



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**Drivers**  
**Cost / Budget:**



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**Drivers**

**It is important to list these drivers in  
the order of their importance**

Example: Your List

1. Corporate Color
2. No Sealant
3. High Impact Strength
4. Budget

Example: Your Customers List

1. Budget
2. Corporate Color
3. High Impact Strength
4. No Sealant



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## Material Attributes

### **Metal Panels are Fabricated from one of Four Basic Materials:**

- Monolithic Metal
- Composite Material with a Plastic Core
- Composite Materials with a Foam Core
- Composite Materials with a Honeycomb Core



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## Material Attributes

### **Monolithic Metal**

- Weldable for most metals
- Higher impact strength generally
- If painted lower price point for small areas in a custom color
- Can be radiused



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## Material Attributes

### Composite with a Plastic Core

- Weldable core only
- Crisp Bend Lines
- Low impact strength
- Very economical for standard colors or large projects in either standard or custom colors
- Can be radiused
- Note Alucobond, Reynobond, and Alpolic are not panel manufacturers. When specifying this product it is important to design and specify around fabricator / system designers for the product



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## Material Attributes

### Composite with a Foam Core

- Insulating
- Good spanning ability
- Relatively Low impact strength
- Best for standard colors or large projects in either standard or custom colors
- Can be used when panel is to provide both inside and outside finished surface



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## Material Attributes

### Composite with a Honeycomb Core

- Relatively Low impact strength
- Best for standard colors or large projects in either standard or custom colors
- Can't be radiused
- Material can handle extremely high wind loads
- Good Spanning Characteristics



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## System Attributes

### We will divide systems into three categories

- Barrier Systems
- Caulk less systems without an open joint /  
Water managed systems
- Open jointed rain screen systems

*Note: The system impacts pricing more than the material*



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## System Attributes

### Barrier Systems

- Generally these systems have the lowest initial cost
- Generally these systems have sealants of some sort and therefore may have a higher maintenance cost associated with them
- Frequently these systems are installed not sequentially



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## System Attributes

### Caulk less systems without an open joint / Water Managed Systems

- Wall design is critical when designing with these systems
- Generally they install sequentially
- No exposed sealants, therefore they stay cleaner than most barrier systems
- Lower maintenance than most barrier systems
- Higher initial cost than most barrier systems



## System Attributes

### Open jointed rain screen systems

- Wall Design critical with these systems
- Systems are both sequential and non-sequentially installed
- Low maintained can be designed without organic materials completely
- Higher initial cost



## Analyzing Drivers and matching them with system and material attributes

Drivers	Material Attribute	System Attribute
Corporate Color	<ul style="list-style-type: none"> <li>• Monolithic metal if scope is small</li> <li>• Any of the composites if scope is large</li> </ul>	Not Applicable
No Sealant	Not Applicable	<ul style="list-style-type: none"> <li>•Water Managed System</li> <li>•Rain-screen System</li> </ul>
High Impact Strength	<ul style="list-style-type: none"> <li>• Monolithic Metal</li> </ul>	Not Applicable
Budget	Do a budget study on rain-screen and water managed systems fabricated out of monolithic metal	



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## Writing a specification to get what you want

- List system as basis for design if possible
- Require testing and engineering calculations
- Require factory trained installing subcontractors
- Specify manufacturer of the system, not the manufacturer sheet the material (Alucobond and Reynobond don't make systems)
- Include a prior approval clauses in your specification



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Thank you!  
**Any Questions?**

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This concludes the American Institute of Architects  
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